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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,659

09/29/2003

Michael Gomer Stelljes JR.

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27752 7590 05/31/2007

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EXAMINER

LONEY, DONALD J

ART UNIT

PAPER NUMBER

1772

MAIL DATE

DELIVERY MODE

05/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/673,659	Applicant(s) STELLJES ET AL.	
	Examiner Donald Loney	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 10-23 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 20, 2007 has been entered.

Terminal Disclaimer

2. The terminal disclaimer filed on March 20, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of patent application numbers 10/950706 and 11/225946 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 24 it is unclear as to how the embossed sites can be non-densified? From the applicant's Declaration filed November 2, 2006 last line on page 2

and the first line on page 3, the applicant states that embossing results in compressed densified areas.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Donnelly (3708366).

Donnelly discloses an embossed multiply sheet wherein the first face comprises non-adhesively bonded sites (top protrusion section just to the right of 9' which can be considered the top of the embossment) and adhesively bonded sites at 13 (i.e. a valley portion). Refer to figure 3, which is substantially the same as applicant's figure 1A. Refer to column 3, line 70 through column 4, line 2 disclosing that the embossed sites are non-adhesively bonded, even if it is quite low for normal moisture content webs and more adhesion is provided if the moisture content is about 20%. Also refer to column 3, line 26 through column 4, line 36. With respect to the embossed and non-embossed recitations, these recitations do not distinguish one site from the other. One site can be considered embossed and the other non-embossed. Therefore, Donnelly would inherently have non-adhesively non-desified bonded sites and adhesively bonded desified sites as recited (not withstanding the embossed and non-embossed recitations).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Donnelly in view of Callahan (4135024).

Donnelly discloses the invention substantially as claimed. See 35 USC 102 rejection above. In the absence of inherency of the embossed and non-embossed sites above, Callahan et al discloses that it is desirable to densify sites in a fibrous structure in order to increase increase frictional engagement and mechanical strength interlocking among the fibers which enhances the structural integrity and mechanical strength of the web. See column 1, lines 60-68.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to Donnelly to densify sites (i.e. embossed and/or non-embossed), as taught by Callahan et al in order to increase increase frictional engagement and mechanical strength interlocking among the fibers which enhances the structural integrity and mechanical strength of the web.

11. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donnelly in view of Ruppel et al (5846636) and Callahan et al (4135024).

Donnelly discloses an embossed multiply sheet wherein the first face comprises non-adhesively bonded embossed sites (top protrusion section just to the right of 9' which can be considered the top of the embossment) and adhesively bonded non-embossed sites at 13 (i.e. a valley portion). Refer to figure 3, which is substantially the same as applicant's figure 1A. Refer to column 3, line 70 through column 4, line 2 disclosing that the embossed sites are non-adhesively bonded, even if it is quite low for normal moisture content webs and more adhesion is provided if the moisture content is about 20%. Also refer to column 3, line 26 through column 4, line 36. Donnelly also teaches the embossments are at least 1000 μ m. Refer to column 3, lines 39-45 which

disclose the frustum that form the embossment is 0.035-0.050 inches high (i.e. 899 μ m-1270 μ m). Donnelly does fail to specifically disclose the less than 30% adhesive bond area. Donnelly is silent as to the percent coverage, however, does disclose the adhesive is applied in small discrete amounts in order to avoid final product stiffening (column 3, lines 58-60). This examiner believes this implies that the adhesive coverage is of a small amount.

Ruppel et al discloses two sheets 5, 6 that are embossed and adhesively 9 bonded. Refer to figures 1 and 4. The height of the embossments is 1-2mm (i.e. 1000-2000 μ m). The area bonded by the adhesive is disclosed as .1-20% (column 2, lines 19-23). Callahan et al discloses that it is desirable to densify sites in a fibrous structure in order to increase increase frictional engagement and mechanical strength interlocking among the fibers which enhances the structural integrity and mechanical strength of the web. See column 1, lines 60-68.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to Donnelly to have the adhesive bond area of less than 30%, as taught by Ruppel, in order to avoid product stiffening and provide a soft feeling tissue therefrom motivated by the fact both references indicate this is a desirable property thereof. With regards to the densified and non-desified portions it would have been obvious to one having ordinary skill in the art at the time the invention was made to Donnelly to densify sites (i.e. embossed and/or non-embossed), as taught by Callahan et al in order to increase increase frictional engagement and mechanical strength interlocking among the fibers which enhances the structural integrity and

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mechanical strength of the web. With regards to the specific properties of claims 2, 3 and 6, which are all drawn to strength properties of the product Ruppel et al does disclose that it is known that embossing multiply sheets results in improved liquid absorption, touch and softness (column 1, lines 12-18). Therefore, it would have been obvious to one having ordinary skill in the art to vary the strength properties of the product as desired for its particular application (i.e. tissue and or toilet paper) in order to form an improved product therefrom. With regards to claim 5, the sheet caliper would be at least 39-79 mils (1000-2000 μ m) since the embossments are of this height in Ruppel (column 2, lines 1-65). With regards to claim 7, the sheet can be in roll form per column 3, lines 44-46 disclosing toilet paper or paper towels in Ruppel. With regards to claim 8, the adhesive is disclosed in dot form (see column 2, lines 13-65 and column 4, lines 17-30 in Ruppel and column 3, lines 58-60 in Donnelly disclosing small discrete amounts). With regards to claim 9, the prior art plies are conventional fibrous plies.

Response to Arguments

12. Applicant's arguments filed March 20, 2007 have been fully considered but they are not persuasive. The applicant argues that Donnelly fails to disclose "non-adhesively bonded non-densified embossed sites" and "adhesively bonded densified non-embossed sites" wherein the embossed sites result from the protuberances of one embossing roll engaging the depression of another embossing roll wherein the embossing would form embossment of a different structure than the non-embossed region. The examiner has indicated above which sections in Donnelly equate to the applicant's sites (embossed and/or non-embossed). These recitations are drawn to

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process limitations, which do not structurally distinguish the claimed product from the prior art. The structure implied by the claim recitations of embossed and non-embossed are that of a ply having alternating projections (i.e. peaks) and valleys. The multiply product being adhesively bonded in the valley and non-adhesively bonded at the peaks. The peaks and valleys actually have the same structure and just project in opposite directions. One could take a single ply from figure 1 and flip it over and the peak would then be the valley and the valley would then be the peak. This is just a matter of semantics whether one calls it an embossment or non-embossment. One could take either ply 12 or 14 in the applicant's figure 1A and flip it upside down and nest it within the other one and it would be the same structure. One could take the entire figure and flip it over and it would be the same structure. Also, refer applicant's figure 3 showing ply 14 being embossed by protuberances 46 into ply 12 at 16 with no adhesive and ply 12 being embossed by roll 26 into ply 14 at 20, which is where the adhesive is located. Additionally from figure 3, both the embossed sites 22 (which equate to 16 in applicant's figure 3) and the non-embossed sites 20 are both formed from protuberance from one roll (42 for roll 26 and 46 for roll 34) engaging the depressions of the other roll (44 in roll 26 and the sections between protuberances 46 in roll 34). The applicant argues that there is no motivation for saying the physical limitations in claims 2, 3 and 6 are obvious over the prior art. However, from Ruppel, column 1, lines 12-18, it is taught that improved liquid absorption, touch and softness (column 1, lines 12-18) are desirable properties in the art. All of these properties would be affected by the embossments and the amount of adhesive used to bond the plies. The prior art teaches the percent

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adhesive coverage recited by the applicant. Therefore, it would have been obvious to one having ordinary skill in the art to vary the strength properties of the product as desired for its particular application (i.e. tissue and or toilet paper) in order to form an improved product therefrom motivated by the fact said properties would be controlled by the embossments and adhesive coverage. One would additionally be motivated to form whatever strength properties are desired for a particular application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Loney whose telephone number is (571) 272-1493. The examiner can normally be reached on Mon, Tues, Thurs and Fri. 8AM-4PM, flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read "Donald J. Loney", with a stylized flourish at the end.

Donald Loney
Primary Examiner
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DJL;D.Loney
05/29/07